

**REMARKS/ARGUMENTS**

Reconsideration of this application is respectfully requested.

The objection to claim 5 is respectfully traversed. The additional acquisition of gain correction data and use of same to further correct sensor output is disclosed in the specification at various places (e.g., see page 11, starting at line 23) and in the Figures (e.g., see Figures 6A and 6B). In short, the word "gain" as used in claim 5 is correct as it stands.

The rejection of claims 1-3 and 5-7 under 35 U.S.C. §103 as allegedly being made "obvious" based on Udagawa JP '419 in view of Frick '818 is respectfully traversed.

The fact that others have detected differential pressure in an attempt to better determine when a diesel particulate filter should be oxidized (i.e., cleaned) is already explained in the introductory portions of applicant's specification (e.g., see the passage starting at page 2, line 11). Even if it is assumed *arguendo* that Udagawa acquires more than one offset correction factor when the engine is not running, the Examiner has admitted that Udagawa fails to disclose that any such offset correction data is acquired as a function of sensor temperature nor does it appear that Udagawa teaches or suggests any gain correction data acquisition processes.

To teach the admitted deficiencies of Udagawa, the Examiner relies upon Frick for a generic teaching that semiconductor pressure sensors of the type that might be used with the applicant's invention were previously known to have output errors as a function of sensor temperature.

At the outset, it is noted that Frick et al. was filed in 1992 and issued in 1994. Surely the fact that a semiconductor pressure sensor output includes errors as a function of temperature was thus well known in 2001 when the Udagawa reference was filed. Yet, Udagawa does not offer any teaching or suggestion with respect to (a) offset errors as a function of temperature or (b) sensor gain errors as a function of pressure and temperature. Surely this by itself demonstrates the fact that it was not obvious to those of ordinary skill in the applicable art that such corrections would be useful in the context of monitoring differential pressure across a diesel particulate filter. The undersigned has not been able to find any teaching in either of the references which would suggest acquiring correction information unique to a particular sensor installation by reading sensor outputs and estimated temperatures when the engine is not running, storing relationships between such detected offset correction factors and pressure sensor temperatures and then subsequently using such acquired information to determine an appropriate offset correction factor for use at a given temperature when the engine is running.

With respect to claim 2, the Examiner refers to lines 40-50 of Frick '818 – but neglects to mention which column is allegedly pertinent. Nor does the Examiner explain where in Udagawa there is any teaching or suggestion that the correction factor there used is associated with a plurality of temperature ranges. Indeed, the Examiner has earlier admitted that Udagawa fails to disclose offset corrections as a function of sensor temperature.

With respect to claim 3, the Examiner alleges that in the “modified” control device of Udagawa a new offset correction factor would replace an older one when the new one is acquired. In the sense that what appears to be a single correction factor in Udagawa might well

be replaced each time it is determined, that does not teach or suggest replacing a given previously acquired offset correction factor for one temperature range with a new determined correction factor for that same range in the context of a plurality of temperature ranges.

With respect to claim 5, the Examiner clearly fails to appreciate that claim 5 is directed to an additional data acquisition and correction process involving sensor gain.

With respect to original claim 6, the Examiner has offered no comment. However, this claim has been cancelled without prejudice or disclaimer thus mooted any intended ground of rejection for this claim in any event.

With respect to claim 7, it is noted that claim 7 is a dependent claim and must be considered "as a whole" under 35 U.S.C. §103 with recitations of its parent claim.

The rejection of claim 4 under 35 U.S.C. §103 as allegedly being made "obvious" based on Udagawa in view of Frick in further view of "Official Notice" is also respectfully traversed.

While it is of course true that the interpolation process is itself very old in the art of mathematics, in the context of claim 4 considered "as a whole", there is simply no suggestion in any of the cited prior art that when offset correction factors are maintained for a plurality of temperature ranges that one should calculate a new correction factor by interpolation for one or more temperature ranges sandwiched between first and second temperature ranges when (a) a new correction factor is obtained for the first temperature range and (b) the correction factor corresponding to the second temperature range nearest to the first temperature range (and

KUBOSHIMA et al  
Appl. No. 10/776,244  
April 25, 2005

sandwiching the range or ranges in question) has already been previously obtained by the correction information acquisition process.

Should the Examiner continue to rely upon "Official Notice" in this regard, it is respectfully requested that this allegation be supported by specific citation to specific prior art in the next office action.

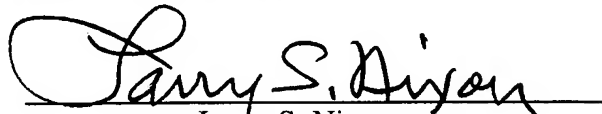
Attention is also drawn to new method claims 8-13 which correspond respectively to apparatus claims 1-5 and 7. These method claims are also believed to be patentably distinct from any teaching or suggestion of the cited art as should be apparent from a review of these claims in light of the above discussion.

Accordingly, this entire application is now believed to be in allowable condition and a formal Notice to that effect is respectfully solicited.

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

By:

  
Larry S. Nixon  
Reg No. 25,640

LSN:vc  
1100 North Glebe Road, 8th Floor  
Arlington, VA 22201-4714  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100